IN THE UNITED STATES DISTRICT COURT
FOR THE NORTHERN DISTRICT OF OHIO
WESTERN DIVISION

Maureen Huffman,

Plaintiff

v.

Electrolux Home Products, Inc.,

Defendant

Case No. 3:12CV2681

ORDER

This is a products-liability suit arising under Ohio law in which a consumer alleges she purchased a defective washing machine.

Plaintiff Maureen Huffman bought a front-loading washer that the defendant, Electrolux Home Products, Inc., designed and manufactured. After using the machine for two-and-a-half years, Huffman noticed a nasty, mildew-like odor emanating from the washer. The odor permeated Huffman's home, and the washer stained or otherwise ruined $300 worth of clothes.

Huffman, who brought this suit on behalf of herself and all Ohio residents who purchased an Electrolux front-loading washer, claims the machine is defective because it is not self-cleaning, thus permitting mold to grow inside the machine.

Pending are Electrolux's motions to exclude the testimony of Huffman's expert, Richard J. Hallowell, and for summary judgment. (Docs. 38, 39). For the following reasons, I grant the motions.

Background

Huffman purchased the washing machine at issue a Frigidaire-branded front-loading machine that Electrolux manufactured in April, 2008, for $900.

The machine worked well until December, 2010, when it developed a "weird, moldy smell." According to Huffman, the odor spread from the first-floor laundry room to the adjacent kitchen, living room, and back porch.

Huffman also observed "yellowish brownish gunk" on the rubber seal of the washer's front door. She used a commercially available cleaning product to remove the gunk, doing so as frequently as after every other load of wash, though this failed to halt the substance's growth.

She later reported that clothes emerged from the washing machine stained and smelling moldy. In general, the stains were six inches long and consisted of yellowish-brown streaks. Huffman estimated that the staining ruined fifteen T-shirts, twenty polo shirts, a few dozen socks, and several towels.

In 2012, Huffman sought help from Electrolux. The company recommended using bleach to clean the machine and leaving the washer door open. Huffman did not follow either recommendation, as she was uncomfortable using bleach and feared her pet cat would jump into the washer if the door were open.

Huffman eventually replaced her front-loader with a General Electric top-loading machine.

She filed this suit in October, 2012, alleging her washer "fail[ed] to self-clean" and caused "detergent, fabric softeners, suds, skin, hair, oils, and lint [to] combine to form a filmy substance that develops within the [machine] in places where consumers cannot remove it." (Doc. 1 at ¶9). That

debris, Huffman maintained, became a food source for mold, which in turn produced the "offensive odors" emanating from the washer. (*Id.*).

Huffman also claimed the washer had an "inadequate drainage system which allows water to stay in the lower portion of the outer tub inside the washer, in the pump area, behind the rubber gasket inside the door, and in other places in the machine." (*Id.* at ¶10).

She brought common-law claims for breach of warranty, negligent design, and failure to warn. She also brought claims under the Ohio Products Liability Act, O.R.C. § 2307.71, *et seq.* (OPLA), for defective design, inadequate warnings, and failure to conform to a representation. Finally, she brought claims under Ohio's version of the Uniform Commercial Code for breach of express and implied warranties.

I granted Electrolux's motion to dismiss Huffman's UCC claims, but allowed the remainder of the suit to proceed. *Huffman v. Electrolux N. Am., Inc.*, 961 F. Supp. 2d 875 (N.D. Ohio 2013), *reconsideration granted in part*, *Huffman v. Electrolux Home Prods., Inc.*, 2013 WL 5591939 (N.D. Ohio).

A. Hallowell's Credentials

Huffman has retained Richard J. Hallowell to opine on the alleged defects in her washing machine. Mr. Hallowell has a bachelor's degree in mechanical engineering and is a registered Professional Engineer in six states and the District of Columbia.

Hallowell's engineering experience was primarily "in the design of mechanical systems for the building industry[.]" (Doc. 49-1 at 21). He has designed heating, ventilation, and air-conditioning (HVAC) systems, though he also has experience with refrigeration and sprinkler systems. Some of his representative projects include designing a new gymnasium and pool on the campus of Rutgers

University, replacing "major mechanical and electrical components" at the Federal Building in Newark, New Jersey, and providing technical assistance and energy-conservation studies for the construction of two dozen buildings on the campus of Drew University in Madison, New Jersey. (*Id.* at 30).

Hallowell is also the President of NRG Consultants, a consulting firm that provides expert testimony. His work at NRG is all "forensic," meaning he works only with "insurance companies and attorney offices" to investigate failed mechanical equipment, prepare reports, and, when necessary, testify in court. (Doc. 47 at 240). As Hallowell explained, "I do no design. I don't do any design of any any buildings anymore, any of the internals in buildings." (*Id.*).

At the time of Hallowell's deposition in this case, he had eighty "open cases" in which a party had asked him to provide an opinion. (*Id.*).

During his lengthy career, Hallowell has had minimal experience with washing machines and mold.

Before taking on the present case, Hallowell had examined only six washing machines all of which were top-loaders. Two of the washers Hallowell inspected had sustained heavy fire damage, so Hallowell did not examine their designs, nor whether such designs would have facilitated mold growth or biofilm buildup.

He inspected the other four washers ten to fifteen years ago while investigating water damage to buildings. He had no recollection, at his deposition, of the condition of those machines, though he testified he would have remembered if any of the washers had a mold problem.

Hallowell testified that he encountered mold in his professional capacity several times while trouble-shooting HVAC systems. According to Hallowell, mold is a "common occurrence" in

heating and air-conditioning systems that have broken down and in which standing water has collected. (*Id.* at 57).

Hallowell had seen mold in ductwork, in condensate drain pans, and on the surface of insulation. But in each of those cases, Hallowell relied on an industrial hygienist to confirm that the substance at issue was, in fact, mold. Hallowell testified he has no training in how to identify mold or fungus, and he agreed that mold sampling is "very, very sophisticated" and "way beyond [his] area of expertise." (*Id.* at 171).

B. Hallowell's Investigation

Hallowell's investigation had three components.

First, Hallowell performed a "non-destructive disassembly" of Huffman's washing machine. This was a process whereby Hallowell disassembled the washer, examined its interior, and put it back together in working condition.

Hallowell conducted the disassembly over a two-day period in July, 2014.

On the first day, Hallowell partly disassembled the washer by opening its back panel and removing the drain pump and hoses connected to the machine. He then removed the washer's "button trap," a small screen that sits within the washer's drainage pipe and prevents debris from clogging the drain. Hallowell observed the button trap was "approximately 75% full of lint, hair and other debris." (Doc. 49-1 at 6). He also detected an unpleasant, mold-like odor emanating from the washer.

After Hallowell reassembled the machine, two experts and a technician working for Electrolux transported the washer from its storage area to Huffman's home, which was directly

across the street from the storage site. There the technician, Roy Morgart, ran three test loads of wash under supervision by the Electrolux experts.

After the first two loads of wash had finished, Hallowell noticed a good deal of standing water inside the wash basin. He also observed that clothes and towel came out of the washer soaking wet. Some of the items were also stained.

When the second load of wash had finished, Morgart noticed "that the clamp that was on the [washer's] rubber boot was cocked or skewed to some degree." (Doc. 47 at 109). Morgart believed the improperly clamped boot may have caused standing water to collect inside the wash basin.

At his deposition, Hallowell who had never reassembled a washing machine before (*id.* at 85) acknowledged he had not reassembled the machine correctly. "[W]hen I put the hose clamp on," Hallowell explained, "I didn't get it totally over the rubber boot. Part of it was on the rubber boot; part of it was on the metal or plastic casing that the boot connected to." (*Id.* at 109).

Morgart then reclamped the boot and removed the debris from the button trap. When the third load of wash had completed, there was no standing water in the wash basin.[1]

The next day, Hallowell again non-destructively disassembled Huffman's washer and conducted a more exhaustive inspection. He catalogued "large deposits of material build up" at

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[1] Electrolux contends Hallowell's opinion is irrelevant because it does not "fit" the facts alleged by Huffman. According to Electrolux, Hallowell opined the washer is defective because it permits standing water to collect in the machine. That opinion, if taken to refer to standing water inside the wash basin, would contradict Huffman's testimony that she never saw standing water inside her washer.

Having reviewed Hallowell's report and deposition, I am satisfied his opinion does not depend on the presence of standing water in the wash basin. Rather, that opinion depends on "wash water remain[ing] in the rubber boot connection, in the pump and in the lower portion of the drainage hose." (Doc. 49-1 at 15). That is the water, according to Hallowell, that fueled mold growth in the washer. Hallowell's opinion is therefore not excludable on relevance grounds.

multiple locations within the washer: 1) where the rubber bellows connects to the wash tub shell; 2) on the outside ring of the spin basket; 3) inside the plastic wash tub shell; 4) on the spin basket's cross arms; 5) inside the drainage-pump hose; and 6) on the underside of one of the vanes in the spin basket. (Doc. 49-1 at 7-8).

Hallowell did not perform any testing on this material himself. Instead, he submitted the samples to an "analytical services laboratory" that determined the samples were "similar to Protein." (*Id.* at 14, 15).

Second, Hallowell purchased a used Electrolux front-loading washer to determine whether it, too, exhibited the material build-up and moldy odor he observed in Huffman's machine.

This machine, also a Frigidaire-branded washer that Hallowell referred to as "the exemplar machine," was six or seven years old; its prior owner reported using it to wash six or seven loads per week. According to Hallowell, it was "identical in physical construction to" Huffman's machine, the only difference being the exemplar machine had two additional wash cycles and a digital display. (*Id.* at 9).

After disassembling the machine, Hallowell observed it "had an undesirable odor and a material build up on the interior surfaces similar to" what he found in Huffman's washer. (*Id.*).

Third, Hallowell disassembled Huffman's General Electric top-loader. In contrast to the front-loaders, the top-loading machine was "reasonably free of material build up and was free of any odors." (*Id.* at 8).

C. Hallowell's Opinions

Based on all this, Hallowell opined to a reasonable degree of engineering certainty Huffman's front-loading washer was defective.

In Hallowell's view, three design defects caused mold to develop inside the washer:

- The location and configuration of the button trap prevents consumers from easily cleaning it. Consequently, the trap becomes clogged "with debris from the washing cycle and restricts the gravity flow of water to the drainage pump which prevents complete removal of the washer water."

- The washer is not "self cleaning" like top-loading washers, which rinse themselves as the water drains from the wash tub.

- "[C]revices in the wash tub and spin basket . . . support the build up of materials that cause mold growth and odors."

(*Id.* at 16).

Given these defects, Hallowell further opined Electrolux should have warned consumers "about the inherent problems that can develop in" its front-loading washers "if interior components of the washer are not periodically disassembled and cleaned by a service technician." (*Id.* at 17).

According to Hallowell, Electrolux could have affixed "easily noticed and readable placards on the washer cabinet which alerted the user about the need for frequent disassembly and cleaning of the internal components of the washer to prevent the production of odors, mold and bacterial growth." (*Id.*).

Finally, Hallowell proposed Electrolux could have eliminated the mold issue by modifying the washer in three ways.

First, Electrolux could have incorporated high-pressure water nozzles into the machines's interior to flush and clean all surfaces onto which wash water had sprayed, thereby eliminating the biofilm feeding the mold.

Second, the company could have installed a button trap that was easy to remove and clean. Such a filter would, in Hallowell's view, be "similar to the lint screens that are presently utilized in domestic clothes dryers." (*Id.* at 15).

Third, Electrolux could have eliminated the crevices in the wash tub, spin basket cross arms, and spin basket vanes and replaced them with smooth surfaces, thereby eliminating the surfaces on which mold and biofilm could collect.

Discussion

Summary judgment is appropriate under Fed. R. Civ. P. 56 where the opposing party fails to show the existence of an essential element for which that party bears the burden of proof. *Celotex Corp. v. Catrett*, 477 U.S. 317, 322 (1986). The movant must initially show the absence of a genuine issue of material fact. *Id.* at 323.

Once the movant meets that initial burden, the "burden shifts to the nonmoving party [to] set forth specific facts showing there is a genuine issue for trial." *Anderson v. Liberty Lobby, Inc*., 477 U.S. 242, 250 (1986). Rule 56 "requires the nonmoving party to go beyond the [unverified] pleadings" and submit admissible evidence supporting its position. *Celotex*, *supra*, 477 U.S. at 324.

I accept the non-movant's evidence as true and construe all evidence in its favor. *Eastman Kodak Co. v. Image Tech. Servs., Inc*., 504 U.S. 451, 456 (1992).

Electrolux seeks summary judgment on three grounds.

Its principal argument is that Hallowell is not qualified to testify under Fed. R. Evid. 702 and *Daubert v. Merrell Dow Pharms., Inc.*, 509 U.S. 579 (1993). For that reason, the company contends, Huffman's statutory and common-law claims for defective design may not proceed.

Electrolux also contends the failure-to-warn claims fail because any additional warning would not have affected Huffman's decision to purchase the Frigidaire machine, given her testimony she did not read any user's manual, advertising, or warnings before purchasing the Frigidaire.

Finally, Electrolux argues Huffman has no evidence of compensable injury.

A. Admissibility of Hallowell's Testimony

An expert witness may provide testimony in the form of an opinion if:

> (a) the expert's scientific, technical, or other specialized knowledge will help the trier of fact to understand the evidence or to determine a fact in issue; (b) the testimony is based on sufficient facts or data; (c) the testimony is the product of reliable principles and methods; and (d) the expert has reliably applied the principles and methods to the facts of the case.

Fed. R. Evid. 702.

The analysis under Rule 702 and *Daubert* has three components.

First, the expert must be qualified to opine on the matter at hand.

"When making a preliminary finding regarding an expert's qualifications . . . the court is to examine not the qualifications of a witness in the abstract, but whether those qualifications provide a foundation for a witness to answer a specific question." *MAR Oil v. Korpan*, 973 F. Supp. 2d 775, 780 (N.D. Ohio 2013).

Second, the expert's testimony must be reliable.

"[T]he requirement that an expert's testimony be reliable means that it must be supported by appropriate validation i.e., 'good grounds,' based on what is known. The task for the district court in deciding whether an expert's opinion is reliable is not to determine whether it is correct, but rather to determine whether it rests upon a reliable foundation, as opposed to, say, unsupported

speculation." *In re Scrap Metal Litig.*, 527 F.3d 517, 529-30 (6th Cir. 2008) (internal quotation marks and citation omitted).

Third, the expert's testimony must be relevant.

The relevance requirement ensures a "fit" between the expert's opinion and the issues to be resolved at trial. *MAR Oil*, *supra*, 973 F. Supp. 2d at 781.

The party offering the expert's opinion has the burden of proving admissibility by a preponderance of the evidence. *Daubert*, *supra*, 509 U.S. at 592 n.10.

1. Qualifications

"Although a witness is not a qualified expert simply because he self-identifies as such, [courts] take a liberal view of what knowledge, skill, experience, training, or education is sufficient to satisfy the requirement." *Bradley v. Ameristep, Inc.*, --- F.3d ----, 2015 WL 5022225, *3 (6th Cir.).

"Whether a proposed expert's experience is sufficient to qualify the expert to offer an opinion on a particular subject depends on the nature and extent of that experience." *U.S. v. Cunningham*, 679 F.3d 355, 379 (6th Cir. 2012).

Electrolux argues Hallowell in unqualified to opine in this case because he has no experience with washing machines or mold. Huffman responds Hallowell's extensive background in the field of mechanical engineering qualifies him to testify about the alleged defects in the Electrolux front-loaders, and how those defects lead to mold growth inside the washer.

a. Opinions on Washing Machines

There is no question Hallowell is, as Huffman observes, a well-qualified mechanical engineer.

But what matters for purposes of Rule 702 are not "the qualifications of a witness in the abstract, but whether those qualifications provide a foundation for a witness to answer a specific question." *Berry v. City of Detroit*, 25 F.3d 1342, 1351 (6th Cir. 1994).

As I explained in an earlier case, "Expertise in the technology of fruit is not sufficient when analyzing the science of apples, and courts have excluded the testimony of engineers because their expertise was not particular to the science involved in the case." *Buck v. Ford Motor Co.*, 810 F. Supp. 2d 815, 842 (N.D. Ohio 2011).

Despite his considerable experience as a mechanical engineer, Hallowell is unqualified to provide an opinion in this case. This is so, because that background gives him no foundation to opine on the proper design of washing machines. *E.g.*, *Newell v. Rubbermaid, Inc.*, 2010 WL 2643417, *3 (N.D. Ohio) (accomplished mechanical engineer who had no experience with forklifts unqualified to testify about forklift's alleged defect), *aff'd*, 676 F.3d 521 (6th Cir. 2012).

It is undisputed Hallowell has never: 1) received training or education about standards governing washing-machine design; 2) consulted with a manufacturer or designer of a washing machine; or 3) designed any component of a washing machine.

Hallowell has had occasion to examine washing machines, but, as I show below, the particulars of those experiences do not qualify him as an expert.

Before taking on this case, Hallowell had inspected only six washing machines, all of which were top-loaders. Because two of those machines had sustained heavy fire damage, Hallowell did not inspect the washers to learn if mold was present or whether the machines' design facilitated mold growth. Hallowell could not recall any details about his inspections of the other four washers, which he examined while investigating water damage to real property.

In short, Hallowell did not inspect these machines or the components of their design for any purpose (let alone to determine whether their designs may have enabled mold to grow inside the machine).[2]

Nor is there merit to Huffman's contention Hallowell's involvement "designing laundry facilities for commercial applications" qualifies him to testify.

As Huffman notes, Hallowell has experience "ensuring that appropriate washers and dryers were selected [for commercial premises] and detailed plans for its maintenance and use were developed and communicated to the end user." (Doc. 49 at 26).

But in those instances, it was apparently a given that the washers themselves were in working order, and that their designs caused no performance issues for the end users. Hallowell accordingly focused on installing the machines and telling the property owners how to run the machines properly, not on determining what component, if any, of the machines' design made them unsatisfactory to the end user. Thus, again, Hallowell had no occasion to opine on the designs of those machines. *Cf. Hayes v. MTD Prods., Inc.*, 518 F. Supp. 2d 898 (W.D. Ky. 2007) (former Consumer Products Safety Commissioner not qualified to testify about defective lawn mower, despite Commissioner's general familiarity with agency's efforts to make lawn mowers safer).

Contrary to Huffman's argument, the cases do not support the position that, simply because Hallowell is an experienced engineer, he is qualified to testify in a case with an engineering component.

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[2] Hallowell has also worked as a forensic engineer on cases involving refrigerators and dishwashers, but his work in those cases focused on defective installations of those appliances, not whether there was a design defect in the appliances themselves. (Doc. 47 at 244-46).

Rather, the case law suggests engineers may testify as experts when their background and experiences give them a foundation to testify on the matter at hand. *Great N. Ins. Co. v. BMW of N. Am. LLC*, --- F. Supp. 3d ----, 2015 WL 470943, *9 (S.D. Ohio) (permitting mechanical engineer to opine on cause of automobile fire because expert had "investigat[ed] hundreds of vehicle fires" and worked in automotive industry for more than thirty years); *Engler v. MTD Prods., Inc.*, 2015 WL 900126, *9 (N.D.N.Y.) (engineer qualified to opine on lawnmower's brake defect, notwithstanding lack of engineering degree, where expert had investigated many accidents and equipment failures, had "practical experience working on similar lawnmowers," and had "testified as an expert regarding brake wear on large trucks"); *cf. Bradley*, *supra*, --- F. 3d at ----, 2015 WL 5022225, at *3 (reversing district court's judgment that excluded expert on ground he was merely an engineer with no relevant experience; record showed expert had decades of experience in materials-failure analysis, and on multiple occasions had examined type of fiber at issue in the case); *Rose v. Truck Ctrs., Inc.*, 388 F. App'x 528, 534 (6th Cir. 2010) (district court erred in holding that mechanic was not qualified to testify that truck's steering gear was defective because witness's "experiences as a mechanic give him specialized knowledge in the areas of truck mechanics and steering gears"); *Early v. Toyota Motor Corp.*, 277 F. App'x 581, 584 (6th Cir. 2008) (mechanical engineer with no experience in automotive manufacturing or design not qualified to testify truck's dust seal was defective); *In re Whirlpool Corp. Front-Loading Washer Prods. Liab. Litig.*, 45 F. Supp. 3d 724, 738 (N.D. Ohio 2014) (Boyko, J.) (expert's "*general* experience in experimental design is insufficiently specific" to permit her to testify "Whirlpool's washers . . . do not develop malodors associated with mold or mildew") (emphasis in original).

It is also illuminating to compare the qualifications of experts who have testified in other moldy-washer cases with Hallowell's qualifications.

The plaintiffs in those cases relied on a former Director of Laundry Technology for Whirlpool, the manufacturer of an allegedly defective washer. *In re Whirlpool Corp.*, *supra*, 45 F. Supp. 3d at 735-36 (expert's "background and experience," including tenure as Whirlpool's Director of Laundry Technology, "qualify him to testify as to . . . inherent design defects in Whirlpool" front-loading washers); *see also In re Front Loading Washing Mach. Class Action Litig.*, 2013 WL 3466821, *3-4 (D.N.J.) (same).

I do not suggest that only an engineer who has designed washers for Whirlpool, Electrolux, or some other appliance manufacturer would be qualified to opine in this case. Rather, these cases illustrate, and persuasively so, the general proposition that a witness qualifies as an expert when he or she has specialized knowledge, whether by background, experience, or education, in the areas on which the litigation focuses.

Huffman having failed to show Hallowell possesses that kind of specialized knowledge, I conclude Hallowell is unqualified to testify about the washing machine's alleged design defects.

b. Opinions on Mold

It is likewise undisputed Hallowell has: 1) no education or training in the field of mycology, the branch of biology devoted to the study of mold and fungus, *see In re Whirlpool Corp.*, *supra*, 45 F. Supp. 3d at 737 n.3; 2) never studied mold, biofilms, or the odors associated with those substances; and 3) no particular knowledge of biology in general.

Hallowell never investigated mold before preparing his report in this case, and he limited his investigation into mold and biofilms to one hour of Internet research into the interaction between those substances and washing machines. (Doc. 47 at 53).

Moreover, Hallowell's only "practical" experience with mold occurred when he trouble-shot HVAC systems.

As Hallowell explained, it was not uncommon to encounter mold in a broken air-conditioning or ventilation system, particularly when a mechanical failure had caused standing water to accumulate. But each time Hallowell encountered mold, he relied, not on his own skills, education, or experience to identify that substance, but rather on an accompanying industrial hygienist who told Hallowell the substance he was seeing and/or smelling was mold.

Hallowell also admitted that he was not qualified to test for mold, as such testing is complicated and beyond his area of expertise.

Finally, the best evidence of Hallowell's insufficient qualifications may be his admission that, despite his investigation into Huffman's washer and research on the topic of mold, he does not know whether the substance he gathered from Huffman's washer was, in fact, mold.

Throughout his deposition, he referred to that material as a "mold-like" substance, not mold:

Q: So, are you concluding that it was mold or that it was mold-like?

A: Mold-like.

Q: And what does that mean?

How is mold-like differentiated from mold?

A: Well, the only way we would know it was mold, if I took it to a laboratory and got a test done and they said, this is definitely mold. So, I'm just saying, based on my experience, this was a mold-like substance.

(Doc. 47 at 132-33).

For these reasons, Hallowell is unqualified to testify any design defects caused mold to develop in Huffman's washing machine. *Cf. In re Front Loading Washing Mach. Class Action Litig.*, *supra*, 2013 WL 3466821, at *5 ("As a microbiologist who specializes in mycology, [plaintiffs' expert] certainly is qualified to look at photographs and opine on whether what he is looking at is biofilm, mold, mildew, fungi or bacteria.").

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At the qualifications stage, my task is to determine whether Hallowell is "qualified by virtue of some specialized knowledge, skill, experience, training, or education." *Hilaire v. DeWalt Indus. Tool Co.*, 54 F. Supp. 3d 223, 235 (E.D.N.Y. 2014). Having concluded Hallowell possesses no such knowledge, skill, experience, training, or education *vis-a-vis* either washing machines or mold, I will grant the motion to exclude his testimony.

2. Reliability

Even assuming Hallowell were qualified to opine in this case, I would still exclude much of his testimony on the grounds it lacks a reliable basis.

a. Mold

Hallowell's lack of qualifications to opine on mold and biofilm growth have also convinced me the methodology he employed to generate his mold-based opinions was unreliable.

Most significantly, Hallowell is presently unable to say whether the substances he detected in Huffman's washing machine are, in fact, types of mold. Rather than performing any testing to answer that question, he compared the past occasions when he had seen and smelled a substance that

an industrial hygienist told him was mold to the visual and nasal observations he made while inspecting Huffman's machine.

This kind of "know it when I see it or smell it" test is not a reliable methodology, at least not for an engineer with no background in mycology or biology.

Hallowell admits, moreover, the testing process to identify mold is complicated, and that he is unqualified to perform such testing. For that reason, Hallowell resorted to conducting an hour's worth of Internet research to gain a general understanding of whether mold and biofilms can develop inside washing machines. Yet he kept no notes or records of what online resources he looked to in performing this research.

Accordingly, I conclude Hallowell employed an unreliable methodology to opine the alleged design defects caused mold or a mold-like substance to develop in Huffman's washing machine.

b. Alternative Design

Under the OPLA, "a product will not be considered defective unless the plaintiff demonstrates that a practical and technically feasible alternative design to the product was available and would have prevented the harm for which the plaintiff seeks to recover, without substantially impairing the usefulness of the product." *Zang v. Cones*, 34 N.E.3d 955, 961 (Ohio App. 2015) (citing O.R.C. § 2307.75(F)).

Consequently, "'[e]xpert witnesses for the plaintiff must establish,'" in all but the most "simple" of cases, "'that there was a practical and technically feasible alternative design.'" *Adkins v. Yamaha Motor Corp., U.S.A.*, 17 N.E.3d 654, 661 & n.2 (Ohio App. 2014) (quoting *Ohio Personal Injury Practice* § 13.13 (2013)).

Hallowell proposed that three modifications to the front-loader would prevent the build-up of mold or mold-like substances in the machine.

However, Hallowell did not draw up schematics for his proposed alternative design. (Doc. 47 at 204-05, 213, 217). Rather, he said he would need "three or four attempts" at putting the modifications together before he could "know it would be a workable scheme." (*Id.* at 274-75).

Nor was he able to say how, or the extent to which, the modifications would compromise the principal (and undisputed) benefits of a front-loading machine: greater water efficiency, less wear-and-tear on clothes, less noise during wash cycles, and more efficient electricity use. This is a critical omission, as Ohio law requires plaintiffs to prove their alternative design would not impair the usefulness of the product. *Zang*, *supra*, 34 N.E.3d at 961.

Hallowell wants to tell the jury that Electrolux should have, and could have, made three modifications to its front-loading washers to avoid the problem Huffman experienced, but he has taken no steps to determine whether those modifications are feasible, whether and the extent to which they would compromise the benefits of front-loaders, or whether they would eliminate mold growth in the machine.

There is, accordingly, no reliable basis supporting Hallowell's opinion regarding alternative design, and his opinions on this issue are inadmissible. *Johnson v. Manitowoc Boom Trucks, Inc.*, 484 F.3d 426, 431 (6th Cir. 2007) ("the design of industrial equipment is a complex process and changes to prevent one problem could create other problems, thus increasing the overall danger of using a project"); *Brown v. Raymond*, 432 F.3d 640, 648 (6th Cir. 2005) (expert's failure "to present and test an alternative design justifies the conclusion of the district court that his testimony would not aid the trier of fact"); *Dhillon v. Crown Controls Corp.*, 269 F.3d 865, 870 (7th Cir. 2001)

(alternative-design considerations "are product and manufacture-specific and cannot be reliably determined without testing").

c. Warnings

An expert's failure "to propose alternative warnings subject to empirical testimony [may] render[ ] his testimony unreliable and irrelevant to the trier of fact." *Brown*, *supra*, 432 F.3d at 648.

Although Hallowell opined Electrolux should have affixed a placard to the front-loader warning consumers of the need to disassemble the machine and clean it frequently, he did not: 1) draft a proposed warning; 2) read any literature on the subject of such warnings; or 3) conduct any form of empirical research on the efficacy of the warning he had in mind. (Doc. 47 at 265-66).

Nor could he say whether "any other manufacturers [of washing machines] provide . . . a warning along the lines of what [he] propose[d]." (*Id.* at 268).

"The fact that [Hallowell] never even drafted a proposed warning renders his opinion akin to 'talking off the cuff; and not acceptable methodology." *Bourelle v. Crown Equip. Corp.*, 220 F.3d 532, 539 (7th Cir. 2000); *see also Jaurequi v. Carter Mfg. Co., Inc.*, 173 F.3d 1076, 1084 (8th Cir. 1999) (district court properly excluded expert's testimony that "warnings were deficient in placement, design, orientation, and content" because "neither [expert] had created or even designed a warning device which would have been more appropriate, much less tested its effectiveness"). His warnings opinions are therefore inadmissible.

B. Viability of Huffman's Claims without Expert Testimony

The parties dispute which, if any, of Huffman's claims may proceed without Hallowell's testimony. As I explain below, none of Huffman's claims may proceed, though not solely because Hallowell's testimony is inadmissible.

1. OPLA Defective-Design Claim

First, Electrolux is entitled to summary judgment on Huffman's claim for defective design under the OPLA.

To prevail on that claim, Huffman needs expert testimony to establish there was a feasible alternative design available to Electrolux. *Zang*, *supra*, 34 N.E.3d at 961; *Adkins*, *supra*, 17 N.E.3d at 661 & n.2 (Ohio App. 2014). Because Hallowell's testimony is inadmissible, this claim may not proceed.

2. Common-Law Claims for Defective Design

Second, I also conclude Electrolux is entitled to summary judgment on the common law claims i.e., tortious breach of warranty and negligent design.[3]

I ruled earlier in this proceeding Huffman could pursue both common-law and statutory claims for defective design. *Huffman*, *supra*, 961 F. Supp. 2d at 881-82.

Huffman contends she is entitled to a jury trial on her common-law claims because a plaintiff need not present expert testimony to prove a product is defective under Ohio's consumer-expectations test. Electrolux counters that Huffman must introduce expert testimony to prove both the existence of a defect and proximate cause, even when proceeding under the consumer-expectations test.

"[A] product is defective in design if it is more dangerous than an ordinary consumer would expect when used in an intended or reasonably foreseeable manner." *Tompkin v. Philip Morris USA, Inc.*, 362 F.3d 882, 901 (6th Cir. 2004).

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[3] These claims are "virtually indistinguishable" from one another, and thus I deal with them together. *Lyon v. Jeep Corp.*, 1992 WL 125231, *2 (Ohio App.) (citing *Temple v. Wean United, Inc.*, 50 Ohio St. 2d 317, 320 (1977)).

Under this "consumer expectations test," a product is defective if "(1) it is more dangerous than an ordinary consumer would expect when used in an intended or reasonably foreseeable manner, (2) the claimed defect was present when the product left the manufacturer, and (3) the claimed defect proximately caused the injuries." *Hisrich v. Volvo Cars of N. Am., Inc.*, 226 F.3d 445, 449 (6th Cir. 2000).

The consumer-expectation test focuses on "what would be contemplated by the ordinary consumer who purchases it, with the ordinary knowledge common to the community as to its characteristics." *Leichtamer v. Am. Motors Corp.*, 67 Ohio St. 2d 456, 465 (1981).

Contrary to Electrolux's position, Ohio law does not require expert evidence to prove a product is "defective" under the first prong of the consumer-expectations test.

"[T]he determination of whether a product is more dangerous than an ordinary person would expect is generally a question of fact which does not require expert testimony." *Hisrich*, *supra*, 226 F.3d at 455; *accord Newell Rubbermaid, Inc. v. Raymond Corp.*, 676 F.3d 521, 532 (6th Cir. 2012) ("Ohio law generally does not require expert testimony under the consumer-expectations theory"); *Lawrence v. Raymond Corp.*, 2011 WL 3418324, *9 (N.D. Ohio) (Katz, J.) (expert testimony not required to prove forklift was defective under consumer-expectations theory); *cf. Aldridge v. Reckhart Equip. Co.*, 2006-Ohio-4964, ¶42 (Ohio App.) ("the consumer need not be able to contemplate the technical considerations of the product's design to find the product defective under the consumer-expectations test").

Rather, "[e]vidence of unsafe, unexpected product performance is sufficient to infer the existence of product defect under the first prong of the consumer-expectation standard." *State Farm Fire & Cas. Co. v. Chrysler Corp.*, 37 Ohio St. 3d 1, 7 (1988).

Here, Huffman testified her washing machine ruined T-shirts and polo shirts, socks, and towels. These articles emerged from the machine, not clean, odorless, and ready to be worn, but stained and stinky. She further testified the machine gave off a nasty odor that permeated her home.

This evidence, taken as true and in the light most favorable to Huffman, is sufficient for a jury to find Huffman's front-loader is "defective." *Hisrich*, *supra*, 226 F.3d at 455; *State Farm*, *supra*, 37 Ohio St. 3d at 7.[4]

Nevertheless, I agree with Electrolux that Huffman had to introduce expert testimony to satisfy the proximate-cause element of her defective-design claims.

To establish proximate cause, Huffman needs evidence showing "some aspect of the challenged design rendered the product's performance less safe than the ordinary consumer would expect, resulting in injury." *Atkins v. Gen. Motors Corp.*, 132 Ohio App. 3d 556, 563 (1999); *Winkles v. Pontiac*, 2004-Ohio-1187, ¶21 (Ohio App.) (same).

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[4] As the Sixth Circuit noted in *Newell*, *supra*, 676 F.3d at 530, "Ohio caselaw is less than clear about the evidence needed to support a consumer-expectations claim at the summary-judgment stage." The court identified some tension between Ohio cases that, on the one hand, suggested a plaintiff must introduce "evidence depicting the expectations that consumers hold about the contested product" to prove a defect, and, on the other, held that evidence of unsafe or defective performance itself suffices to prove a defect. *Id.*

If Ohio law required a plaintiff to produce evidence of a consumer's objective expectations about a product's performance, then Huffman's case could not proceed. It is undisputed she has no such evidence; she offers only her own testimony, from which a reasonable jury could infer only her own subjective expectations regarding the washer's performance.

Electrolux has raised this interesting, and difficult, question in its moving papers, but only in a footnote. (Doc. 52 at 14 n.3). It has not attempted to reconcile, moreover, its contention Huffman's failure to introduce such evidence is fatal to her design-defect claim with the long line of cases holding evidence of mere defective or unsafe performance is sufficient under the first prong of the consumer-expectations test. This, then, is not the appropriate case to work through the tension the Sixth Circuit identified in *Newell*, as I deem Electrolux's underdeveloped argument forfeited. *Popovich v. Cuyahoga Cnty. Court of Common Pleas*, 276 F.3d 808, 823 (6th Cir. 2002).

Huffman's theory is that three aspects of the front-loader's design — the placement of the button trap, the lack of a self-cleaning mechanism, and the presence of crevices on the drainage hose and at various places inside the spin basket — combined to allow biofilm, mold, and their attendant odors to develop in the machine.

This type of causal mechanism, which involves both an engineering component and a mycological or biological component, is beyond the day-to-day experiences of the average juror. Surely a jury would understand a washing machine that renders clothes foul-smelling and stained is defective. But the jurors are unlikely to understand what it is, specifically, about the washer's design that facilitates mold growth and biofilm buildup, or how, in particular, mold develops in the washer.

Accordingly, as the causal theory on which Huffman relies is sufficiently complex, Huffman must have expert evidence to survive summary judgment. *Asbury v. Key Mobility Servs., Ltd.*, 2008-Ohio-3609, ¶73 (Ohio App.) ("Unlike situations where the causal link is obvious, mechanical devices are complicated and the realm for jury speculation is much wider."); *see also id.* at ¶¶95-96 (expert testimony required to prove defect in locking mechanism permitting wheelchair-bound man to sit in and operate an automobile proximately caused injuries to pedestrians); *Adkins*, *supra*, 17 N.E.3d at 662 ("we do not believe that laypersons can adequately evaluate whether a rollover risk constitutes a design defect without the benefit of expert testimony or some other evidence to show that the vehicle in question rolled over due to a design defect").

Because I have, for the reasons given above, concluded Hallowell is unqualified to testify, I will grant summary judgment to Electrolux on Huffman's common-law claims for defective design.

3. Failure-to-Warn Claims

Third, Electrolux contends no reasonable jury could find for Huffman on her failure-to-warn claims because Huffman has no evidence of causation.

Here the company relies on Huffman's deposition testimony that she did not: 1) do any research on washing machines before purchasing the Electrolux machine; 2) see or rely on any Electrolux advertising before purchasing the machine; or 3) read the user's manual that came with the washer.

"Put simply," the company argues, "warnings played no role in Ms. Huffman's purchasing decision." (Doc. 38-1 at 24).

Huffman acknowledges her deposition testimony, but contends it does not entitle Electrolux to judgment as a matter of law. Rather, Huffman argues "[a] reasonable jury could conclude that a more prominent warning regarding the need to clean the interior surfaces on the cabinet or door of the Frigidaire would have resolved the problem." (Doc. 50 at 27).

To prove a failure-to-warn claim, the plaintiff must establish "(1) a duty to warn against reasonably foreseeable risks; (2) breach of this duty; and (3) an injury that is proximately caused by the breach." *Graham v. Am. Cyanamid Co.*, 350 F.3d 496, 514 (6th Cir. 2003).

"In analyzing the proximate cause issue as it relates to failure-to-warn cases," the Ohio Supreme Court has "divided proximate causation . . . into two sub-issues: (1) whether lack of adequate warnings contributed to the plaintiff's [use of the product], and (2) whether [use of the product] constitute[d] a proximate cause of the plaintiff's injuries." *Hisrich*, *supra*, 226 F.3d at 451.

Ohio law further provides that when a manufacturer provides no warning at all, the plaintiff is entitled to a rebuttable presumption that the absent warning proximately caused plaintiff's use of the product. *Seley v. G.D. Searle & Co.*, 67 Ohio St. 2d 192, 200 (1981).

It is undisputed Electrolux did not warn consumers that its front-loading washers could develop mold and unpleasant odors, or that, to avoid these problems, a consumer would need to disassemble the machine frequently to clean its interior. Huffman is therefore entitled to a rebuttable presumption the company's failure to warn proximately caused her to purchase and use the machine.

But Electrolux has introduced substantial evidence rebutting that presumption.

Most importantly, Huffman testified she did not do any research when deciding which washing machine to purchase, she did not see and thus could not have relied on any Electrolux advertising before purchasing the Frigidaire, and did not read the user's manual before or after purchasing the machine.

"Ohio law is clear that where a plaintiff fails to read and/or follow clear instructions . . . the plaintiff's failure to adequately warn claim fails for lack of the requisite proximate cause." *Wade v. Diamant Boart, Inc.*, 179 F. App'x 352, 355 (6th Cir. 2006) (collecting Ohio authorities); *see also Phan v. Presrite Corp.*, 100 Ohio App. 3d 195 (1994) ("Even if the additional warnings suggested by plaintiff's expert . . . were given, they would not have prevented the injuries because neither [plaintiff] read the warning.").

As in *Wade* and *Phan*, it is undisputed here that Huffman did not read or rely on any warnings or advertisements in deciding to purchase or use the Frigidaire-branded front-loader. Accordingly, no reasonable jury could conclude the absence of a warning about mold and odors proximately caused her to buy or use that product.

4. Failure-to-Conform-to-a-Representation Claim

Finally, Electrolux is entitled to summary judgment on Huffman's claim that the washer failed to conform to a representation. Electrolux's moving papers show the record is devoid of any alleged misrepresentation regarding the washer's performance, and Huffman's response did not address that claim let alone identify evidence in the record showing there is disputed factual issue on that question.[5]

Conclusion

It is, therefore

ORDERED THAT:

1. Electrolux's motion to exclude the testimony of Richard J. Hallowell (Doc. 39) be, and the same hereby is, granted; and

2. Electrolux's motion for summary judgment (Doc. 38) be, and the same hereby is, granted.

So ordered.

/s/ James G. Carr
Sr. U.S. District Judge

[5] Because I am granting summary judgment to Electrolux on all of Huffman's claims on the grounds specified above, I need not consider Electrolux's further argument Huffman has no evidence of compensable damages to support any of her claims.